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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/636,259B

DATE: 11/20/2002

TIME: 11:38:46

Input Set : A:\10738-44.ST25.txt

Output Set: N:\CRF4\11192002\I636259B.raw

3 <110> APPLICANT: Small, Kersten
 4 Liggett, Stephen
 6 <120> TITLE OF INVENTION: Alpha-2A-Adrenergic Receptor Polymorphisms
 8 <130> FILE REFERENCE: 10738-44
 10 <140> CURRENT APPLICATION NUMBER: 09/636,259B
 11 <141> CURRENT FILING DATE: 2000-08-10
 13 <160> NUMBER OF SEQ ID NOS: 26
 15 <170> SOFTWARE: PatentIn version 3.1
 17 <210> SEQ ID NO: 1
 18 <211> LENGTH: 1170
 19 <212> TYPE: DNA
 20 <213> ORGANISM: Homo sapiens
 22 <400> SEQUENCE: 1

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| 25 | ctgggtggcca cgctcgcat ccctttctcg ctggccaaacg aggtcatggg ctactggtag | 120 |
| 27 | tccggcaagg cttggtgccga gatctacctg gcgcgtcgacg tgctttctg cacgtcgcc | 180 |
| 29 | atcggtgcacc tgtgcgccat cagcctggac cgctactgtt ccacacaca ggccatcgag | 240 |
| 31 | tacaacctga agcgcacgccc gcgcgcacatc aaggccatca tcattaccgt gtgggtcatc | 300 |
| 33 | tcggccgtca tctccttccc gccgctcatc tccatcgaga agaaggccgg cggcggccgg | 360 |
| 35 | ccgcagccgg ccgagccgcg ctgcgagatc aacgaccaga atgtgtacgt catctcgctg | 420 |
| 37 | tgcattcggtc ctttcttcgc tccctgcctc atcatgatcc tggctacgt ggcacatcac | 480 |
| 39 | cagatcgcca agcgtcgac ccgcgtgcca cccagccgcg ggggtccgga cgccgtcgcc | 540 |
| 41 | gcgcgcgggg gggcaccga gcgcaggccc aacggcttgg gcgcgcagcg cagcgcgggc | 600 |
| 43 | ccggggggcg cagaggccga accgctgccc acccagctca acggcgcccc tggcgagccc | 660 |
| 45 | gcgcgcggccg ggccgcgcga caccgacgcg ctggacctgg aggagagctc gtcttccgac | 720 |
| 47 | cacgcccggc ggcctccagg gccccgcaga cccgagcgcg gtccccgggg caaaggcaag | 780 |
| 49 | gcccggcga gccaggtaa gccgggcgac agcctgccc gcgcgcggcc gggggcgcacg | 840 |
| 51 | gggatcgaaa cgccggctgc agggccgggg gagggcgcg tcgggtctgc caaggcgtcg | 900 |
| 53 | cgctggcgccg ggcggcagaa ccgcgagaag cgcttcacgt tcgtgctggc cgtggtcatc | 960 |
| 55 | ggagtgttcg tgggtgtctg gttccccttc ttcttcacat acacgctcac ggccgtcg | 1020 |
| 57 | tgctccgtgc cacgcacgct cttcaaattc ttcttctgtt tcggctactg caacagctcg | 1080 |
| 59 | ttgaacccgg tcattcacat catttcaac cacatttcc gccgcgcctt caagaagatc | 1140 |
| 61 | ctctgtcggt gggacaggaa gcggatcg | 1170 |
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| 67 | <213> ORGANISM: Homo sapiens | |
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| 72 | ggcggcgccc gggccacccc ttactccctg caggtgacgc tgacgctgggt gtgcctggcc | 120 |
| 74 | ggcctgctca tgctgctcac cgtttcgcc aacgtgctcg tcattatcgcc cgtgttcacg | 180 |
| 76 | agccgcgccc tcaaggcgcc ccaaaacctc ttcttgggt ctctggcctc ggccgacatc | 240 |
| 78 | ctgggtggcca cgctcgcat ccctttctcg ctggccaaacg aggtcatggg ctactggtag | 300 |

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| 80 | ttcggcaagg | cttggtgcgaa | gatctacctg | gcgctcgacg | tgctttctg | cacgtcgcc | 360 | | | | | | | | | | |
| 82 | atcgtgcacc | tgtgcgccat | cagcctggac | cgctactgg | ccatcacaca | ggccatcgag | 420 | | | | | | | | | | |
| 84 | tacaacctga | agcgcacgccc | gcgcgcac | aaggccatca | tcatcaccgt | gtgggtcatc | 480 | | | | | | | | | | |
| 86 | tcggccgtca | tctccttccc | gccgctcatc | tccatcgaga | agaaggcgg | cgccggcggc | 540 | | | | | | | | | | |
| 88 | ccgcagccgg | ccgagccgac | ctgcgagatc | aacgaccaga | agtggta | catctcgac | 600 | | | | | | | | | | |
| 90 | tgcacatcggt | ccttcttcgc | tccctgcctc | atcatgatcc | tggta | gcgcacatctac | 660 | | | | | | | | | | |
| 92 | cagatcgcca | agcgtcgac | ccgcgtgcca | cccagccgc | ggggtccgga | cgccgtcgcc | 720 | | | | | | | | | | |
| 94 | gcgcgcgg | ggggcaccga | gcgcaggccc | aagggtctgg | gccccgagcg | cagcgcgggc | 780 | | | | | | | | | | |
| 96 | ccggggggcg | cagaggccga | accgctgccc | accagctca | acggcgcccc | tggcgagccc | 840 | | | | | | | | | | |
| 98 | gcgcgcggcc | ggccgcgcga | caccgacgcg | ctggacactgg | aggagagctc | gtcttccgac | 900 | | | | | | | | | | |
| 100 | cacgcccgg | ggcctccagg | gccccgcaga | cccgagcg | gtccccgggg | caaaggcaag | 960 | | | | | | | | | | |
| 102 | gcccgagcg | gccaggtgaa | gccgggcgac | gcctgcccgc | ggcgcgggccc | gggggcgacg | 1020 | | | | | | | | | | |
| 104 | ggatcggtt | cgccggctgc | agggccgggg | gaggagcg | tggggctgc | caaggcg | 1080 | | | | | | | | | | |
| 106 | cgctggcg | ggcggcagaa | ccgcgagaag | cgcttacgt | tcgtgtggc | cgtggtcac | 1140 | | | | | | | | | | |
| 108 | ggagtgtt | tggtgtgt | gttccccttc | ttcttacact | acacgctcac | ggccgtcg | 1200 | | | | | | | | | | |
| 110 | tgctccgtgc | cacgcacgt | cttcaaattc | ttcttctgg | tcggta | ctactg | 1260 | | | | | | | | | | |
| 112 | ttgaacccgg | tcatctacac | catttcaac | cacgattcc | gccgcgcctt | caagaagatc | 1320 | | | | | | | | | | |
| 114 | ctctgtcg | gggacaggaa | gcggatcg | gtggatcg | gtggatcg | gtggatcg | 1350 | | | | | | | | | | |
| 117 | <210> | SEQ ID NO: | 3 | | | | | | | | | | | | | | |
| 118 | <211> | LENGTH: | 450 | | | | | | | | | | | | | | |
| 119 | <212> | TYPE: | PRT | | | | | | | | | | | | | | |
| 120 | <213> | ORGANISM: | Homo sapiens | | | | | | | | | | | | | | |
| 122 | <400> | SEQUENCE: | 3 | | | | | | | | | | | | | | |
| 124 | Met | Gly | Ser | Leu | Gln | Pro | Asp | Ala | Gly | Asn | Ala | Ser | Trp | Asn | Gly | Thr | |
| 125 | 1 | | | 5 | | | | | 10 | | | | | 15 | | | |
| 128 | Glu | Ala | Pro | Gly | Gly | Gly | Ala | Arg | Ala | Thr | Pro | Tyr | Ser | Leu | Gln | Val | |
| 129 | | | | 20 | | | | 25 | | | | | 30 | | | | |
| 132 | Thr | Leu | Thr | Leu | Val | Cys | Leu | Ala | Gly | Leu | Leu | Met | Leu | Leu | Thr | Val | |
| 133 | | | | 35 | | | | 40 | | | | 45 | | | | | |
| 136 | Phe | Gly | Asn | Val | Leu | Val | Ile | Ile | Ala | Val | Phe | Thr | Ser | Arg | Ala | Leu | |
| 137 | | | | 50 | | | | 55 | | | 60 | | | | | | |
| 140 | Lys | Ala | Pro | Gln | Asn | Leu | Phe | Leu | Val | Ser | Leu | Ala | Ser | Ala | Asp | Ile | |
| 141 | | 65 | | | | 70 | | | | 75 | | | 80 | | | | |
| 144 | Leu | Val | Ala | Thr | Leu | Val | Ile | Pro | Phe | Ser | Leu | Ala | Asn | Glu | Val | Met | |
| 145 | | | | 85 | | | | 90 | | | 95 | | | | | | |
| 148 | Gly | Tyr | Trp | Tyr | Phe | Gly | Lys | Ala | Trp | Cys | Glu | Ile | Tyr | Leu | Ala | Leu | |
| 149 | | | | 100 | | | | 105 | | | 110 | | | | | | |
| 152 | Asp | Val | Leu | Phe | Cys | Thr | Ser | Ser | Ile | Val | His | Leu | Cys | Ala | Ile | Ser | |
| 153 | | | | 115 | | | | 120 | | | 125 | | | | | | |
| 156 | Leu | Asp | Arg | Tyr | Trp | Ser | Ile | Thr | Gln | Ala | Ile | Glu | Tyr | Asn | Leu | Lys | |
| 157 | | 130 | | | | 135 | | | 140 | | | | | | | | |
| 160 | Arg | Thr | Pro | Arg | Arg | Ile | Lys | Ala | Ile | Ile | Ile | Thr | Val | Trp | Val | Ile | |
| 161 | | 145 | | | | 150 | | | | 155 | | | 160 | | | | |
| 164 | Ser | Ala | Val | Ile | Ser | Phe | Pro | Pro | Leu | Ile | Ser | Ile | Glu | Lys | Lys | Gly | |
| 165 | | | | 165 | | | | 170 | | | 175 | | | | | | |
| 168 | Gly | Gly | Gly | Gly | Pro | Gln | Pro | Ala | Glu | Pro | Arg | Cys | Glu | Ile | Asn | Asp | |
| 169 | | | | 180 | | | | 185 | | | 190 | | | | | | |
| 172 | Gln | Lys | Trp | Tyr | Val | Ile | Ser | Ser | Cys | Ile | Gly | Ser | Phe | Phe | Ala | Pro | |
| 173 | | 195 | | | | 200 | | | 205 | | | | | | | | |

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Input Set : A:\10738-44.ST25.txt
Output Set: N:\CRF4\11192002\I636259B.raw

176 Cys Leu Ile Met Ile Leu Val Tyr Val Arg Ile Tyr Gln Ile Ala Lys
177 210 215 220
180 Arg Arg Thr Arg Val Pro Pro Ser Arg Arg Gly Pro Asp Ala Val Ala
181 225 230 235 240
184 Ala Pro Pro Gly Gly Thr Glu Arg Arg Pro Asn Gly Leu Gly Pro Glu
185 245 250 255
188 Arg Ser Ala Gly Pro Gly Gly Ala Glu Ala Glu Pro Leu Pro Thr Gln
189 260 265 270
192 Leu Asn Gly Ala Pro Gly Glu Pro Ala Pro Ala Gly Pro Arg Asp Thr
193 275 280 285
196 Asp Ala Leu Asp Leu Glu Glu Ser Ser Ser Asp His Ala Glu Arg
197 290 295 300
200 Pro Pro Gly Pro Arg Arg Pro Glu Arg Gly Pro Arg Gly Lys Gly Lys
201 305 310 315 320
204 Ala Arg Ala Ser Gln Val Lys Pro Gly Asp Ser Leu Pro Arg Arg Gly
205 325 330 335
208 Pro Gly Ala Thr Gly Ile Gly Thr Pro Ala Ala Gly Pro Gly Glu Glu
209 340 345 350
212 Arg Val Gly Ala Ala Lys Ala Ser Arg Trp Arg Gly Arg Gln Asn Arg
213 355 360 365
216 Glu Lys Arg Phe Thr Phe Val Leu Ala Val Val Ile Gly Val Phe Val
217 370 375 380
220 Val Cys Trp Phe Pro Phe Phe Thr Tyr Thr Leu Thr Ala Val Gly
221 385 390 395 400
224 Cys Ser Val Pro Arg Thr Leu Phe Lys Phe Phe Trp Phe Gly Tyr
225 405 410 415
228 Cys Asn Ser Ser Leu Asn Pro Val Ile Tyr Thr Ile Phe Asn His Asp
229 420 425 430
232 Phe Arg Arg Ala Phe Lys Lys Ile Leu Cys Arg Gly Asp Arg Lys Arg
233 435 440 445
236 Ile Val
237 450
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241 <211> LENGTH: 450
242 <212> TYPE: PRT
243 <213> ORGANISM: Homo sapiens
245 <400> SEQUENCE: 4
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248 1 5 10 15
251 Glu Ala Pro Gly Gly Ala Arg Ala Thr Pro Tyr Ser Leu Gln Val
252 20 25 30
255 Thr Leu Thr Leu Val Cys Leu Ala Gly Leu Leu Met Leu Leu Thr Val
256 35 40 45
259 Phe Gly Asn Val Leu Val Ile Ile Ala Val Phe Thr Ser Arg Ala Leu
260 50 55 60
263 Lys Ala Pro Gln Asn Leu Phe Leu Val Ser Leu Ala Ser Ala Asp Ile
264 65 70 75 80
267 Leu Val Ala Thr Leu Val Ile Pro Phe Ser Leu Ala Asn Glu Val Met
268 85 90 95

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271 Gly Tyr Trp Tyr Phe Gly Lys Ala Trp Cys Glu Ile Tyr Leu Ala Leu
 272 100 105 110
 275 Asp Val Leu Phe Cys Thr Ser Ser Ile Val His Leu Cys Ala Ile Ser
 276 115 120 125
 279 Leu Asp Arg Tyr Trp Ser Ile Thr Gln Ala Ile Glu Tyr Asn Leu Lys
 280 130 135 140
 283 Arg Thr Pro Arg Arg Ile Lys Ala Ile Ile Ile Thr Val Trp Val Ile
 284 145 150 155 160
 287 Ser Ala Val Ile Ser Phe Pro Pro Leu Ile Ser Ile Glu Lys Lys Gly
 288 165 170 175
 291 Gly Gly Gly Pro Gln Pro Ala Glu Pro Arg Cys Glu Ile Asn Asp
 292 180 185 190
 295 Gln Lys Trp Tyr Val Ile Ser Ser Cys Ile Gly Ser Phe Phe Ala Pro
 296 195 200 205
 299 Cys Leu Ile Met Ile Leu Val Tyr Val Arg Ile Tyr Gln Ile Ala Lys
 300 210 215 220
 303 Arg Arg Thr Arg Val Pro Pro Ser Arg Arg Gly Pro Asp Ala Val Ala
 304 225 230 235 240
 307 Ala Pro Pro Gly Gly Thr Glu Arg Arg Pro Lys Gly Leu Gly Pro Glu
 308 245 250 255
 311 Arg Ser Ala Gly Pro Gly Gly Ala Glu Ala Glu Pro Leu Pro Thr Gln
 312 260 265 270
 315 Leu Asn Gly Ala Pro Gly Glu Pro Ala Pro Ala Gly Pro Arg Asp Thr
 316 275 280 285
 319 Asp Ala Leu Asp Leu Glu Glu Ser Ser Ser Ser Asp His Ala Glu Arg
 320 290 295 300
 323 Pro Pro Gly Pro Arg Arg Pro Glu Arg Gly Pro Arg Gly Lys Gly Lys
 324 305 310 315 320
 327 Ala Arg Ala Ser Gln Val Lys Pro Gly Asp Ser Leu Pro Arg Arg Gly
 328 325 330 335
 331 Pro Gly Ala Thr Gly Ile Gly Thr Pro Ala Ala Gly Pro Gly Glu Glu
 332 340 345 350
 335 Arg Val Gly Ala Ala Lys Ala Ser Arg Trp Arg Gly Arg Gln Asn Arg
 336 355 360 365
 339 Glu Lys Arg Phe Thr Phe Val Leu Ala Val Val Ile Gly Val Phe Val
 340 370 375 380
 343 Val Cys Trp Phe Pro Phe Phe Phe Thr Tyr Thr Leu Thr Ala Val Gly
 344 385 390 395 400
 347 Cys Ser Val Pro Arg Thr Leu Phe Lys Phe Phe Phe Trp Phe Gly Tyr
 348 405 410 415
 351 Cys Asn Ser Ser Leu Asn Pro Val Ile Tyr Thr Ile Phe Asn His Asp
 352 420 425 430
 355 Phe Arg Arg Ala Phe Lys Lys Ile Leu Cys Arg Gly Asp Arg Lys Arg
 356 435 440 445
 359 Ile Val
 360 450
 363 <210> SEQ ID NO: 5
 364 <211> LENGTH: 22
 365 <212> TYPE: DNA

RAW SEQUENCE LISTING

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Output Set: N:\CRF4\11192002\I636259B.raw

366 <213> ORGANISM: Homo sapiens
368 <400> SEQUENCE: 5
369 tttacccatc ggctctccct ac 22
372 <210> SEQ ID NO: 6
373 <211> LENGTH: 23
374 <212> TYPE: DNA
375 <213> ORGANISM: Homo sapiens
377 <400> SEQUENCE: 6
378 gagacaccag gaagagggtt tgg 23
381 <210> SEQ ID NO: 7
382 <211> LENGTH: 20
383 <212> TYPE: DNA
384 <213> ORGANISM: Homo sapiens
386 <400> SEQUENCE: 7
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391 <211> LENGTH: 23
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393 <213> ORGANISM: Homo sapiens
395 <400> SEQUENCE: 8
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400 <211> LENGTH: 24
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419 <212> TYPE: DNA
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436 <211> LENGTH: 23
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• RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/636,259B

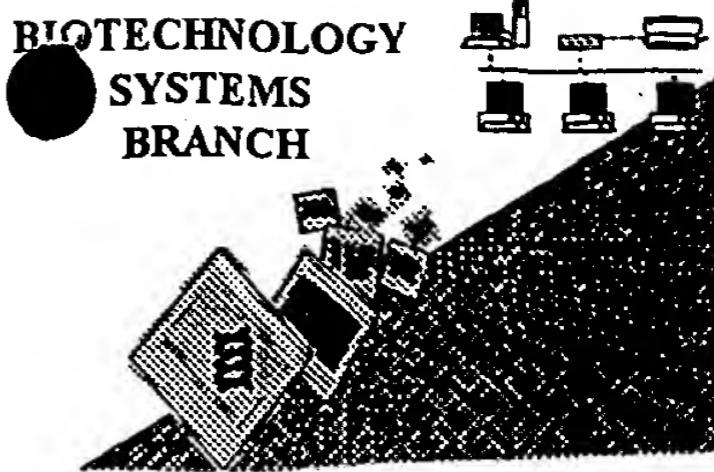
DATE: 11/20/2002
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:19; N Pos. 7



CRF Problem Report

The Scientific and Technical Information Center (STIC) experienced a problem when processing the following computer readable form (CRF):

Application Serial Number: 09/636,259
Filing Date: 8/10/2002
Date Processed by STIC: 2/7/2002

STIC Contact: Mark Spencer, 703-308-4212

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Nature of Problem:

The CRF (was):

- (circle one) Damaged or Unreadable (for Unreadable, see attached)
 Blank (no files on CRF) (see attached)
 Empty file (filename present, but no bytes in file) (see attached)
 Virus-infected. Virus name: _____ The STIC will not process the CRF.
 Not saved in ASCII text
 Sequence Listing was embedded in the file. According to Sequence Rules,
submitted file should **only** be the Sequence Listing.
 Did not contain a Sequence Listing. (see attached sample)
 Other: _____

PLEASE USE THE CHECKER VERSION 3.1 PROGRAM TO REDUCE ERRORS.
SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.
Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.
Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
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Or
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Revised 01/29/2002